

REMARKS

This amendment responds to the office action mailed July 25, 2003. Claims 1-13 and 25-38 are currently pending. Claims 14-24 have been withdrawn. Claims 9-13 and 25-28 have been indicated as allowable.

Claims 4, 5, 9, and 29 have been amended to correct minor grammatical errors. Claim 33 has been amended to more clearly define the subject matter being claimed.

New claim 37 incorporates the subject matter of claim 1. New claim 38 incorporates the subject matter of claim 29.

It is respectfully submitted that no new matter has been added by this amendment.

Allowable Subject Matter

Applicants wish to thank the Examiner for the allowance of claims 9-13 and 25-28.

Rejections Under 35 U.S.C. § 103

Claims 1-8 and 29-36 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,090,998 to Grooms et al. (Grooms). This rejection is respectfully traversed.

Independent claim 1 recites a bone sheet comprising “an at least partially demineralized field substantially *surrounding* at least one mineralized region.” Similarly, independent claim 29 recites a bone sheet comprising “at least one mineralized region that is substantially *surrounded* by the at least partially demineralized field.” The words of a claim must be given their plain meaning unless the applicant has provided a clear definition in the specification. MPEP 2111.01 (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989)). The American Heritage® Dictionary defines the term “surround” to mean “to extend on all sides of simultaneously; encircle.”¹ Thus, both claims 1 and 29 recite that the demineralized region substantially encircles at least one mineralized region.

In contrast, Grooms discloses a bone implant having at least one mineralized bone segment *adjacent to* a demineralized segment. It is respectfully submitted that Grooms fails to disclose or suggest a bone implant having a demineralized region substantially surrounding or encircling a mineralized region. In fact, Grooms fails to disclose or suggest an implant having any bone segment or region being substantially surrounded by another bone segment or region. Thus, even if the demineralized regions and mineralized regions of Grooms can be switched, as argued by the Examiner, Grooms would still fail to disclose this element of

¹ American Heritage® Dictionary of the English Language 1743 (4th ed. 2000)
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claims 1 and 29, and it is respectfully submitted that claims 1 and 29 are allowable over Grooms.

It is to be noted that the use of the term “surround” does not mean that the demineralized region must encapsulate or enclose the mineralized region in order to fall within the scope of the claims. As clearly illustrated in Fig. 4 of the originally-filed specification, for example, the mineralized regions of the bone sheet, while being surrounded by the demineralized region of the bone sheet, still has exposed top and bottom surfaces.

Furthermore, it is respectfully submitted that Grooms fails to disclose or suggest a bone “sheet” as recited in claims 1 and 29. The American Heritage® Dictionary defines a sheet as “a broad, thin, usually rectangular mass or piece of material.”² Grooms clearly fails to disclose or suggest a bone implant in the form of a *sheet*. Thus, for at least this additional reason, claims 1 and 29 are allowable over Grooms.

Because claims 2-7 and 30-35 depend from claims 1 and 29 respectively, it is respectfully submitted that these claims are also allowable over Grooms.

Independent claim 36 recites a bone “sheet” comprising “an at least partially demineralized region disposed around the at least one mineralized region.” As discussed above, Grooms fails to disclose a bone sheet. Furthermore, Grooms also fails to disclose have a demineralized region “disposed around” a mineralized region. As discussed above, Grooms merely discloses a demineralized region *adjacent to* a mineralized region. Thus, it is respectfully submitted that claim 36 is allowable over Grooms.

Therefore, for at least the reasons stated above, it is respectfully requested that this rejection to claims 1-8 and 29-36 be withdrawn.

New Claims

New claims 37 and 38 incorporate the subject matter of claims 1 and 29, respectively, and merely define the present invention more clearly to explicitly state that to be within the scope of the claims, the demineralized region need only substantially surround the side surfaces of the mineralized region, and not necessarily the top and/or bottom surfaces. Thus, for at least the reasons stated above for claims 1 and 29, it is respectfully submitted that new claims 37 and 38 are also allowable over the prior art.

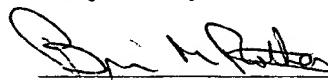
² *Id.* at 1603.
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In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney at (212)790-6295, if a telephone call could help resolve any remaining items.

Submitted herewith are (1) a Petition for Extension of Time under 37 CFR § 1.136 to extend the time for response for a period of 3 months from October 25, 2003 to January 25, 2003; and (2) a Fee Transmittal Sheet for additional claims in excess of those already paid for. No other fees are believed due with the submission of this amendment. Should any other fees be due, please charge such fees to Pennie & Edmonds LLP Deposit Account No. 16-1150.

Respectfully submitted,

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Enclosures